

Warm Up 9/10/12: Simplify:

$$\begin{aligned} & \left(\frac{8a^{-4}b^7c^2}{2a^3b^{-5}c^4} \right)^{-2} = \frac{8^{-2} 8^8 b^{-14} c^{-4}}{2^{-2} a^{-6} b^{10} c^{-8}} \\ & \frac{2^2 a^8 a^6 c^8}{8^2 b^{14} b^{10} c^4} = \frac{4a^{14}c^4}{64b^{24}} = \frac{a^{14}c^4}{16b^{24}} \end{aligned}$$

Section 1.4: Solving Equations:

$$\textcircled{1} \quad -27 + 6x = 3(x-3)$$

$$\begin{array}{r} -27 + 6x = 3x - 9 \\ \quad -3x \quad -3x \\ \hline \end{array}$$

$$-27 + 3x = -9$$

$$+27$$

$$+27$$

$$\begin{array}{r} 3x = 18 \\ \hline 3 \quad 3 \end{array}$$

$$\textcircled{x=6}$$

$$\textcircled{a} \quad 5(x+4) + 3x = -6(2x+10)$$

$$5x + 20 + 3x = -12x - 60$$

$$8x + 20 = -12x - 60$$

$$+12x$$

$$+12x$$

$$20x + 20 = -60$$

$$-20 \quad -20$$

$$\frac{20x}{20} = \frac{-80}{20}$$

$$x = -4$$

Sometimes, Always, or Never?

$$\textcircled{3} \ 11 + 3x - 7 = 6x + 5 - 3x$$

$$\begin{array}{r} 4 + \cancel{3x} = \cancel{3x} + 5 \\ -\cancel{3x} \quad -\cancel{3x} \\ \hline \end{array}$$

$$4 = 5$$

NEVER!

$$\textcircled{4} \quad 6x + 5 - 2x = 4 + 4x + 1$$

$$\begin{array}{r} \cancel{4x} + 5 = \cancel{4x} + 5 \\ \cancel{4x} \qquad - \cancel{4x} \\ \hline 5 = 5 \end{array}$$

ALWAYS!

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SOMETIMES

$$x + 5 = 10$$

$$x = 5$$

Homework:

Practice 1.4 # 5-13, 26, 27, 29, 30, 31

⑨ brother 1 + brother 2 = \$55

$$X + X + 15 = \$55$$

$$2x + 15 = 55$$

$$\textcircled{10} \text{ side 1} + \text{side 2} + \text{side 3} = 15$$

$$5x + 12x + 13x = 15$$

$$\textcircled{11} \quad \begin{matrix} 1^{\text{st}} \\ \# \end{matrix} + \begin{matrix} 2^{\text{nd}} \\ \# \end{matrix} + \begin{matrix} 3^{\text{rd}} \\ \# \end{matrix} = 126$$

$$X + X + 1 + X + 2 = 126$$

$$\textcircled{26} \quad 4(\text{train1} + \text{train2}) = 600$$

$$4(x + 2x) = 600$$